SANDELL

THROUGH-WALL FLASHINGS
EXPANSION JOINTS . . . .
WATER STOPS . . . . .

SANDELL THROUGH-WALL FLASHING

THE ESSENTIAL REQUIREMENTS OF A GOOD THROUGH-WALL FLASHING

(1) Simplicity of Design

The flashings should be as simple in design as possible to accomplish the desired results. Flashings which are complicated in design invite trouble because, being rarely installed as intended, they often cause serious leakage.

(2) Must Give Good Bond

Through-wall Flashing must bond with the masonry to function properly.

(3) Must Expand and Contract Equally with the Masonry

It must be of a material that has approximately the same coefficient of expansion and contraction as that of the masonry, thus preventing differences of movement under temperature changes, which break the bond between flashing and masonry.

(4) Must Be Pliable, Yet Have Rigidity

It must be pliable enough to conform with the surface on which it is installed, yet rigid enough to make a firm turn-up on the inside of the wall.

(5) Not Compressible

It must be of a material that will not be compressed under the weight of masonry.

(6) Must Not Bend at Sharp Angles

It must be of a material that will not bend too sharply. Sharp bends weaken the flashing. Rolled bends are desirable.

(7) Must Not Discolor Adjoining Masonry

It must be a material that will under no conditions discolor the masonry.

SANDELL THROUGH-WALL FLASHING MATERIALS

Are Made in the Following Types and Conform to All of the Above Essential Requirements

GENERAL CONSTRUCTION

Type S

Type S Through-Wall Flashing is composed of two layers of full seal, asphalt-saturated cotton fabric between which is compressed a substantial steel wire-mesh, filled and coated with a special plastic asphalt, free from solvents or foreign fillers, to form a composite, extremely tough, waterproof flashing, with substantially the same coefficient of expansion as that of masonry.

The gridlike surfaces provide an excellent mechanical bond with the mortar and the tacky surfaced fabric provides an additional adhesive bond not obtainable with metal.

It is thin, light in weight, flexible and sufficiently rigid to maintain its shape when bent or formed by hand.

Type S Flashing is easily handled in long lengths and requires no prefabrication.

Type SL

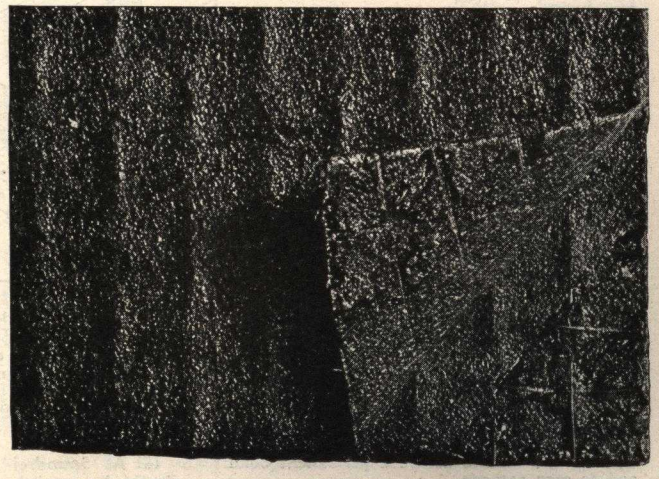
Type SL Flashing is similar in construction to Type S but is made from Sandell Asphalt Membrane instead of from woven cotton fabric. The same wire mesh is used and it has all of the advantages of Type S as regards bond, ease of handling, etc.

Type L

Type L is the same as Type SL except that Type L has a steel mesh of wider openings.

Asphalt Membrane

Sandell Asphalt Membrane was created by Sandell Engineers, especially for waterproofing and flashing purposes and is distinctly different from any other waterproofing fabric. It is neither a woven cloth or a felt but is, in fact, a sheet of pure asphalt reinforced with sufficient cotton fibres to enable it to be readily handled, the cotton fibres being thoroughly coated and protected by the asphalt.



General Construction of Sandell Through-Wall Flashing

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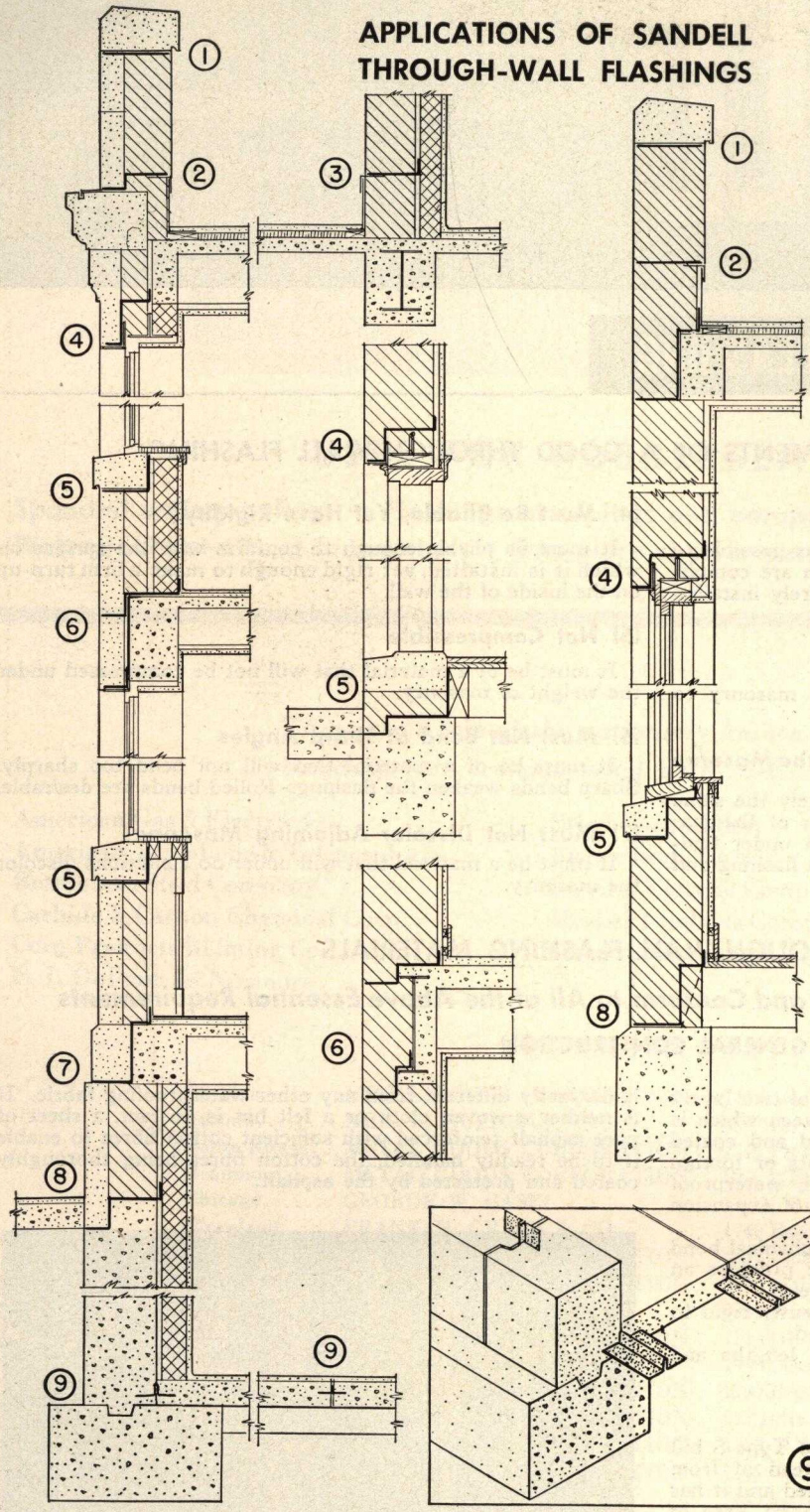
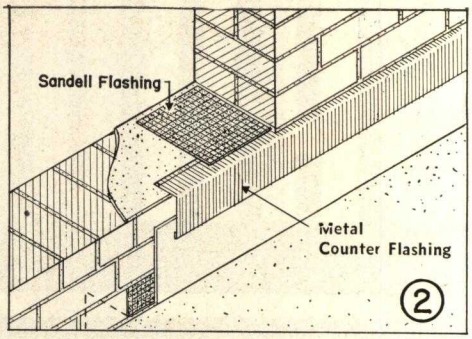
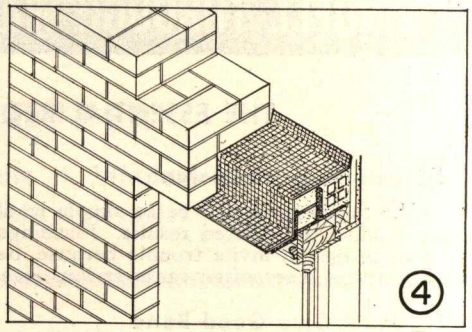
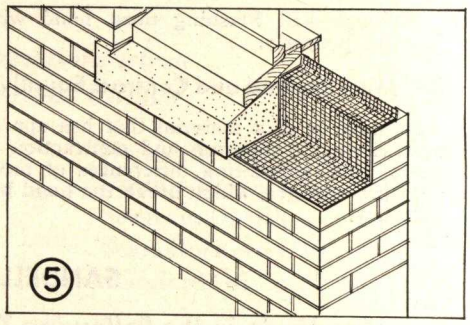
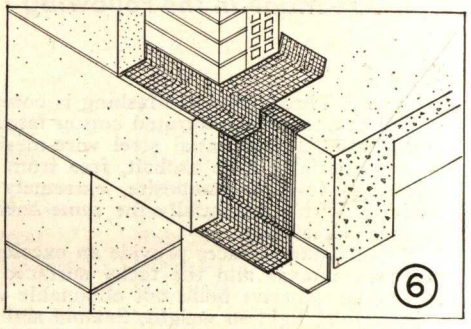
APPLICATIONS OF SANDELL THROUGH-WALL FLASHINGS

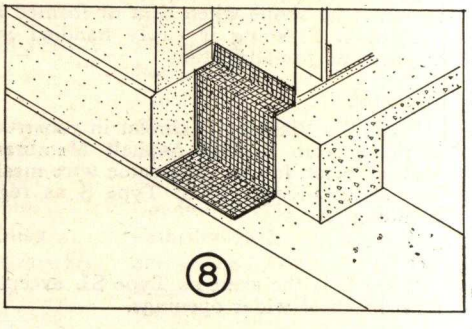


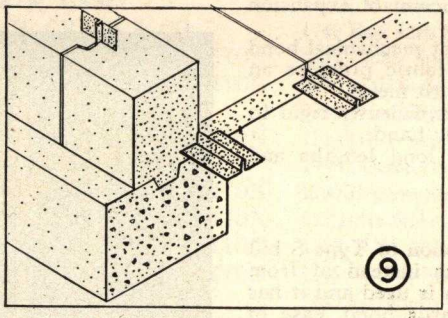












(1) Under Stone Copings—Sandell Through-Wall Flashing used directly under stone copings prevents any seepage into the wall below, due to shrinking of cement mortar joints and development of cracks.

(2) Used with Exposed Metal—A rolled edge should be formed on back edge of metal flashing and Sandell Through-Wall Flashing carried through the wall to assure a permanent bond and to stop seepage.

(3) At Penthouse and Setback Walls—All vertical walls above roof line should have Sandell Through-Wall Flashing carried through the wall at the level of the roof flashing.

(4) At Heads of Doors and Windows—Heads of doors and windows should have Sandell Through-Wall Flashing carried through wall and to outside to carry off moisture which might otherwise work through.

(5) Under Sills of Doors and Windows—Complete pans of Sandell Through-Wall Flashing are easily formed and installed under all sills of doors and windows to save the wall decorations and to protect the wall construction below.

(6) At Spandrel Beams—Sandell Flashing should be carried through the wall as indicated. Two methods of flashing are shown in the sectional views. They protect the steel and prevent seepage over the heads of windows or at the ceiling.

(7) At Projecting Courses—Base or bond courses should have Sandell Through-Wall Flashing carried back of them—especially if course is of molded brick.

(8) Over Concrete Foundations—Sandell Through-Wall Flashing at this point completely isolates the foundation from the wall above, yet acts as a bond between them.

(9) At Basement Expansion Joints—Expansion joints as shown in the wall, between the wall and floor slab, and between adjacent sections of slab. The Sandell flashing is used as an expansion joint water-stop and prevents any seepage of water through the joints.

SANDELL EXPANSION JOINT WATER STOP

Essential requirements of expansion joint water stop

1. Material must be absolutely waterproof.

Sandell Type "S" Expansion Joint Water Stop has been tested by independent testing engineers up to a head of 137 feet of water (limit of the test) with no leakage or effect.

2. Material must bond rigidly to adjoining units.

The grid surface of Sandell Expansion Joint Water Stop cast in the concrete forms a watertight bond equal to the strength of the material. An embedment of 2¼" under test showed no apparent slippage or paths of water after 128' head (limit of test).

3. Bonded units must be free to move.

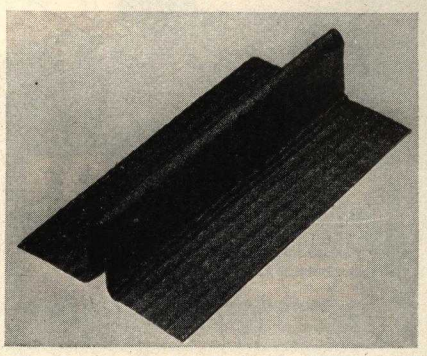
The expansion pleat allows the adjacent units to move without any stretching or sliding of the expansion joint material.

(Copies of test reports available on request.)

Sandell Expansion Joint Water Stop

Sandell Expansion Joint Water Stop as shown in cut is formed from Type S. It is used wherever a watertight joint is required between two units of concrete subject to movement due to expansion or settlement.

The grid surface of the material makes a watertight bond with the concrete which has withstood tests up to a hundred foot head of water.



DESCRIPTION OF MATERIAL

Sandell Type "S" Expansion Joint Water Stop is composed of two layers of full seal asphalt saturated cotton fabric between which is compressed a substantial woven steel wire mesh filled and coated with a plastic asphalt, free from solvents or foreign fillers, and the whole bonded under pressure into a sheet. This forms a composite, extremely tough, durable, waterproof material, with substantially the same coefficient of expansion as that of concrete or masonry.

USES AND ADVANTAGES

Sandell Expansion Joint Water Stop is designed for use wherever a watertight joint is required between two units of concrete or masonry subject to movement due to expansion, contraction, or settlement. This easily workable material is therefore recommended for foundation walls, floor slabs, roof slabs, retaining walls, tanks, dams, pits, and so forth. Many expansion joints, so called, are in reality spacers and act as water stops only when the concrete is expanding. We recommend their use where necessary with our material as shown. Sandell expansion joint installed at the time of construction and permanently bonded into the concrete eliminates leakage through joints and saves later makeshift waterproofing, repairs, and maintenance.

INSTALLATION

The sketches on the following page show typical installations which may be varied to fit special requirements of the job. The most popular width of material is 12 inch. This allows for 4 inches of the width of the material to be embedded in each of the adjoining units of concrete and 4 inches is allowed for the expansion pleat. Where the slabs are thin and lower pressures are expected a 9-inch width is sometimes used. The material should be installed in as long pieces as possible to avoid unnecessary splices. Where splices occur the material should be lapped at least 4 inches and carefully sealed with asphalt mastic; or one end should be opened, the other end inserted and sealed in with asphalt mastic. Attention is called to the preformed units shown on the opposite page. These units are made up in our factory and are used where the water stop changes direction. These preformed units simplify the installation and assure the proper function of the water stop at these critical points. In ordering them the size of the expansion pleat must be given.

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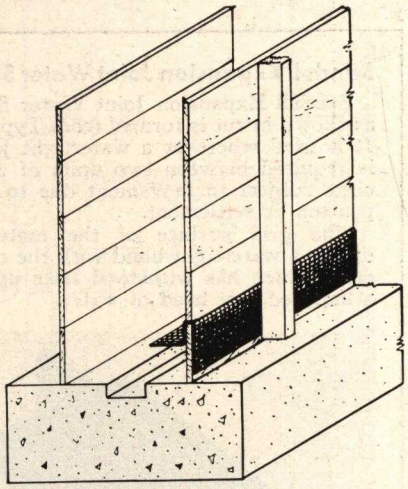


FIG. 1

SHOWING FOOTING AND SANDELL WATER STOP SET IN FORM OF FOUNDATION WALL BEFORE CONCRETE IS POURED

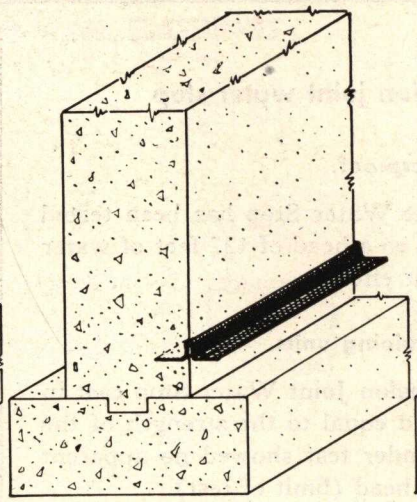


FIG. 2

SHOWING CONCRETE WALL AFTER IT HAS BEEN STRIPPED OF FORM WORK AND SANDELL WATER STOP BENT INTO POSITION TO RECEIVE FLOOR SLAB

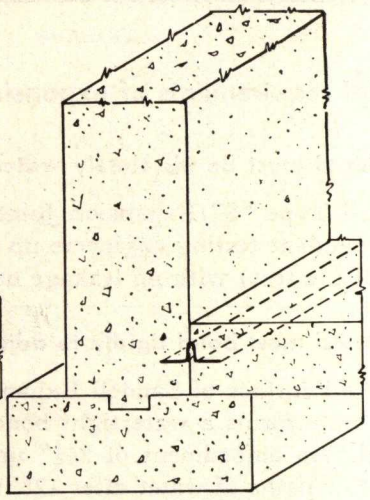


FIG. 3

SHOWING FLOOR SLAB IN PLACE AND SANDELL WATER STOP SECURELY EMBEDDED IN FLOOR SLAB AND FOUNDATION WALL

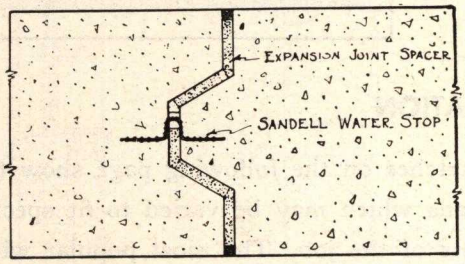


FIG. 4

VERTICAL WALL SECTION USING SANDELL WATER STOP WITH EXPANSION JOINT SPACER STRIP

NOTE:—
WHERE CONCRETE UNITS ARE SUBJECTED TO RISES IN TEMPERATURE SUCH AS CAUSED BY THE HEAT OF THE SUN ON CONCRETE ROAD SLABS AND EXPOSED RETAINING WALLS, IT IS NECESSARY TO USE AN EXPANSION JOINT SPACER STRIP AS SHOWN IN FIGS 4, 5 & 6

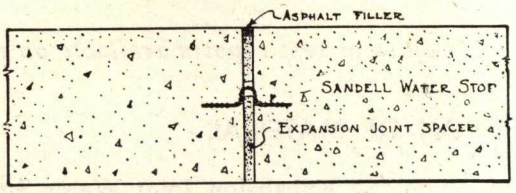


FIG. 6

SECTION SHOWING JOINT IN CONCRETE SLAB USING SANDELL WATER STOP IN CONJUNCTION WITH EXPANSION JOINT SPACER STRIP

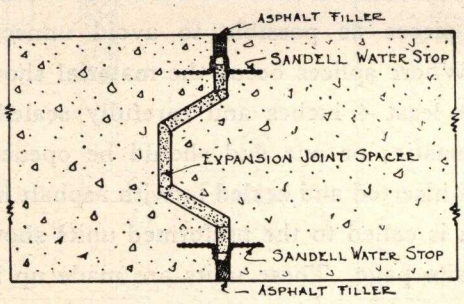
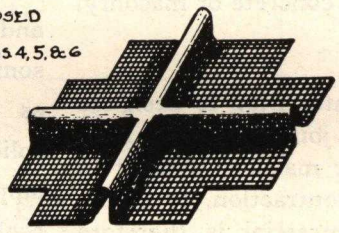


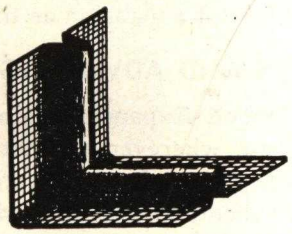
FIG 5

VERTICAL WALL SECTION USING TWO WATER STOPS

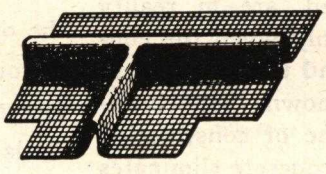
PREFORMED UNITS



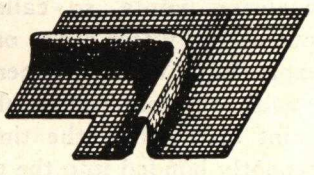
RIGHT ANGLED CROSSOVER



90 DEGREE HORIZONTAL & VERTICAL



90 DEGREE TEE



90 DEGREE CORNER

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